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European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI,
SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 03/03006

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 26-44

Method for identifying drug targets

2. claims: 1-25, 45-53

Method for correlation of user data to pathways in a
database

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 03/03006

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G06F19/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|---|
| X | <p>VAN HELDEN J ET AL: "Representing and analysing molecular and cellular function using the computer." BIOLOGICAL CHEMISTRY. 2000 SEP-OCT, vol. 381, no. 9-10, September 2000 (2000-09), pages 921-935, XP008032491 ISSN: 1431-6730 abstract; figures 1,4,5 page 921, right-hand column, paragraph 2 page 925, right-hand column, paragraph 3 - page 927, right-hand column, paragraph 1 page 930, right-hand column, paragraph 2-4 page 930, right-hand column, paragraph 6 - page 932, right-hand column, paragraph 3</p> <p style="text-align: center;">----- -/--</p> | <p>1-7,13, 14, 18-25, 45-53</p> |

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
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T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

G document member of the same patent family

Date of the actual completion of the international search

8 July 2004

Date of mailing of the international search report

22/07/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Türkel i, Y

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 03/03006

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-------------------------------------|
| X | <p>EP 1 158 447 A (GMD GMBH) 28 November 2001 (2001-11-28)</p> <p>abstract; figure 1 paragraphs '0008! - '0036! paragraphs '0072!, '0073!</p> <p>-----</p> | <p>1-6, 8-17, 20-44</p> |
| X | <p>OLIVER DIANE E ET AL: "Ontology development for a pharmacogenetics knowledge base." PACIFIC SYMPOSIUM ON BIOCOMPUTING. PACIFIC SYMPOSIUM ON BIOCOMPUTING. 2002, 'Online! 3 January 2002 (2002-01-03), pages 65-76, XP002287419 Retrieved from the Internet: URL:http://helix-web.stanford.edu/psb02/o1 iver.pdf> 'retrieved on 2004-06-29! abstract page 65 - page 72</p> <p>-----</p> | <p>1-9,13, 14,18, 45-53</p> |
| X | <p>KARP P D ET AL: "Integrated pathway-genome databases and their role in drug discovery." TRENDS IN BIOTECHNOLOGY. JUL 1999, vol. 17, no. 7, July 1999 (1999-07), pages 275-281, XP004169726 ISSN: 0167-7799 page 275, left-hand column, paragraph 1-4 page 278, right-hand column, paragraph 3 - page 280, right-hand column, paragraph 2</p> <p>-----</p> | <p>1-6, 47-53</p> |
| X | <p>RZHETSKY A ET AL: "Poster: A knowledge model for analysis and simulation of regulatory networks in bioinformatics studies aiming at disease gene discovery" AMIA 99 FALL ANNUAL SYMPOSIUM, 'Online! 1999, pages 1-5, XP002287421 Retrieved from the Internet: URL:http://www.amia.org/pubs/proceedings/s ymposia/1999/D005314.pdf> 'retrieved on 2004-06-30! abstract; figure 1 page 1, left-hand column, paragraph 1 - page 2, right-hand column, paragraph 1 page 5, left-hand column, paragraph 1</p> <p>-----</p> <p style="text-align: center;">-/--</p> | <p>1-7, 47-53</p> |

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International Application No
PCT/US 03/03006

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-----------------------|
| X | GOBLE C A ET AL: "TRANSPARENT ACCESS TO MULTIPLE BIOINFORMATICS INFORMATION SOURCES" IBM SYSTEMS JOURNAL, IBM CORP. ARMONK, NEW YORK, US, vol. 40, no. 2, 2001, pages 532-551, XP001116348 ISSN: 0018-8670 abstract; figure 1 page 533, right-hand column, paragraph 1 page 534, right-hand column, paragraph 1-3 page 536, left-hand column, paragraph 1 - right-hand column, paragraph 3 ----- | 1-7, 47-53 |
| A | WO 01/55911 A (INFORMAX INC) 2 August 2001 (2001-08-02) abstract; figure 2 page 2, line 8 - page 7, line 24 ----- | 1-53 |

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 03/03006

| Patent document cited in search report | | Publication date | Patent family member(s) | Publication date |
|---|---|---------------------|----------------------------|---------------------|
| EP 1158447 | A | 28-11-2001 | EP 1158447 A1 | 28-11-2001 |
| | | | WO 0136658 A2 | 25-05-2001 |
| | | | EP 1232280 A2 | 21-08-2002 |
| WO 0155911 | A | 02-08-2001 | EP 1264249 A1 | 11-12-2002 |
| | | | JP 2003521071 T | 08-07-2003 |
| | | | WO 0155911 A1 | 02-08-2001 |